

NOTE

New Host Record of a Ceraphronid (Hymenoptera) in Trichoptera Pupae

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Pupae of the microcaddisfly *Ochrotichia moselyi* Flint (Trichoptera: Hydroptilidae) were collected in Costa Rica that contained pupae of *Aphanogmus* sp. (Hymenoptera: Ceraphronidae). The caddisflies were collected in Puntarenas Province, Bellavista River, ca. 1.5 km NW of Las Alturas, at 1400 m elevation (8.951°N, 82.846°W). Collections were made June 15-17, 1986. All material is housed in the University of Minnesota Insect Collection, St. Paul, Minnesota. Three collections in alcohol yielded one *Aphanogmus* pupa each. There were a total of 12 *Ochrotichia moselyi* cocoons of which 3 contained *Aphanogmus* pupae, 6 contained eaten caddisfly pupae, and the remainder, developed caddisflies. The cocoons with the parasitoid pupae contained only the wings and cast larval skin of the caddisfly. There was one *Aphanogmus* per parasitized cocoon. Dr Paul Dessart, a ceraphronid specialist in Belgium, confirmed Luhman's identifications of the *Aphanogmus* in the cocoons and stated this to be a new ordinal and family host record for Ceraphronidae (pers. comm., 1996). Heretofore recorded hosts of Ceraphronidae included

Diptera, Homoptera, Hymenoptera, Neuroptera, and Thysanoptera (Muesebeck 1979; Hanson and Gauld 1995).

The *Aphanogmus* were discovered inside the cocoons of *Ochrotichia moselyi*, but outside of the caddisfly pupa. Only the developed wings remained uneaten. The *Ochrotichia* cocoons may have been parasitized when exposed to the surface near the water substrate interface. *Ochrotichia* pupate within their larval cases in small clusters of individuals on the sides of rocks and boulders. During the dry season, pupae are often exposed or closer to the surface.

ACKNOWLEDGMENTS

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LITERATURE CITED

- Hanson, P. E. and I. D. Gauld (eds.). 1995. *The Hymenoptera of Costa Rica*. Oxford University Press, NY.
- Muesebeck, C. F. W. 1979. Superfamily Ceraphronoidea, pp.1187-1195. In K. V. Krombein, P. D. Hurd, Jr., D. R. Smith, and B. D. Burks eds., *Catalog of Hymenoptera of America North of Mexico*, Vol. 2. *Symphlyta and Apocrita*, Washington, D.C.: Smithsonian Institution Press